ENVIRONMENTAL ASSESSMENT
Fisheries Division
Montana Fish, Wildlife & Parks
Cottonwood Creek Fish Barrier

General Purpose: The 1995 Montana Legislature enacted sections 87-1-272 through 273, MCA that direct Montana Fish, Wildlife & Parks (FWP) to administer a Future Fisheries Improvement Program (FFIP). The program involves providing funding for physical projects to restore degraded fish habitat in rivers and lakes for the purpose of improving wild fisheries. The legislature established an earmarked funding account to help accomplish this goal. Additionally, the 1999 Montana Legislature amended statute sections 87-1-273, 15-38-202 and Section 5, Chapter 463, Laws of 1995 to create a bull trout and cutthroat trout enhancement program. This legislation was amended again in 2013 to open the program to all native fish species (statute section 87-1-283). The program now calls for the enhancement of native fish through habitat restoration, natural reproduction and reductions in species competition by way of the FFIP.

The FFIP tentatively plans to provide partial funding toward the construction of a fish barrier on Cottonwood Creek (Figure 1). Cottonwood Creek (Beaverhead County) is a tributary to Blacktail Deer Creek near Dillon and, if completed, would eventually support a conservation population of westslope cutthroat trout (WCT). This population is one of five remaining genetically unaltered populations of WCT in the Beaverhead drainage. Completion of this project will be an essential component in implementing native fish restoration in Cottonwood Creek and its tributaries, with the goal of securing additional habitat to expand the WCT population.

Westslope cutthroat trout currently inhabit a 0.6-mile reach above a natural fish barrier in Cottonwood Creek. By increasing the protected stream area by 4.5 miles, a fivefold increase in the secure population from ~600 to 2500 fish is expected in five successful spawning seasons. This genetically pure population will be key in native WCT reintroductions scheduled to take place across the Upper Missouri watershed, including the FFIP funded Selway Creek restoration. A barrier is a necessary component of this native fish restoration and is the focus of this Environmental Assessment (EA). Fish removal is not part of this EA.

The proposed barrier would provide a cost-effective alternative that will expand and secure the Cottonwood Creek WCT population. This project, in conjunction with removal of nonnative fishes (not in the scope of this EA), would protect over 5 miles of habitat. The structure will be composed of treated wood (Figures 2 and 3).

I. Location of Project:

This project will be conducted on Cottonwood Creek, a tributary to the Blacktail Deer Creek, located approximately 20 miles southeast of Dillon within Township 10S, Range 7W, Section 26 in Beaverhead County (Figure 1).

II. Need for the Project:

One goal within FWP's six-year operations plan for the fisheries program is to "protect, maintain, and restore native fish populations, their habitats, life cycles, and genetic diversity to ensure stewardship of native species." The upper 0.6 miles of Cottonwood Creek supports a genetically unaltered population of WCT in the Beaverhead watershed and there are only an estimated 600 fish in this population. This project would be a first step in the expansion of WCT habitat by 4.5 miles of stream, which is expected to have a significant positive impact on the restoration of native fish populations and their habitats, life cycles, and genetic diversity. Additional habitat increases the population capacity not only for growth, but for survival and reproduction. It also increases the resiliency of critical populations.

Agency Authority for the Proposed Action:

87-1-702. Powers of department relating to fish restoration and management. The department is hereby authorized to perform such acts as may be necessary to the establishment and conduct of fish restoration and management projects as defined and authorized by the act of congress, provided every project initiated under the provisions of the act shall be under the supervision of the department, and no laws or rules or regulations shall be passed, made, or established relating to said fish restoration and management projects except they be in conformity with the laws of the state of Montana or rules promulgated by the department, and the title to all lands acquired or projects created from lands purchased or acquired by deed or gift shall vest in, be, there remain in the state of Montana and shall be operated and maintained by it in accordance with the laws of the state of Montana. The department shall have no power to accept benefits unless the fish restoration and management projects created or established shall wholly and permanently belong to the state of Montana, except as hereinafter provided.

III. Scope of the Project:

The project proposes to install a fish barrier on Cottonwood Creek. The overall goal is to conserve an important population of WCT. This project is expected to cost $31,601.60. Of this total, the FFIP would be contributing up to $7,500 to complete the project. Other expected contributors are listed below:

Contributor	In-kind services	In-kind cash
Montana Trout Unlimited	$4,101.60	$5,000
George Grant Trout Unlimited		$5,000
Trout and Salmon Foundation		$5,000
Montana Trout Foundation		$5,000
Total Matching Funds: $24,101.60		

IV. Environmental Impact Review Checklist:

Evaluation of the impacts of the Proposed Action including secondary and cumulative impacts on the Physical and Human Environment

Project Title: Cottonwood Creek Fish Barrier

Division/Bureau: Fisheries Division / Fish Management Bureau
Description of Project: The FFIP tentatively plans to provide partial funding toward the construction of a fish barrier on Cottonwood Creek. The overall goal is to secure native WCT in the headwaters of Cottonwood Creek and conserve over 5 miles of important habitat.

A. POTENTIAL IMPACTS TO THE PHYSICAL ENVIRONMENT

Will the proposed action result in potential impacts to:	Unknown	Potentially Significant	Minor	None	Can Be Mitigated	Comments Provided
1. Geology and soil quality, stability and moisture			X		X	X
2. Air quality or objectionable odors			X			X
3. Water quality, quantity and distribution (surface or groundwater)			X		X	X
4. Existing water right or reservation				X		X
5. Vegetation cover, quantity and quality			X			X
6. Unique, endangered, or fragile vegetative species				X		
7. Terrestrial or aquatic life and/or habitats			X			X
8. Unique, endangered, or fragile wildlife or fisheries species			X			X
9. Introduction of new species into an area				X		
10. Changes to abundance or movement of species		X				X

B. POTENTIAL IMPACTS ON THE HUMAN ENVIRONMENT

Will the proposed action result in potential impacts to:	Unknown	Potentially Significant	Minor	None	Can Be Mitigated	Comments Provided
1. Noise and/or electrical effects			X			X
2. Land use				X		
3. Risk and/or health hazards				X		
4. Community impact				X		
5. Public services/taxes/utilities				X		
6. Potential revenue and/or project maintenance costs			X			X
7. Aesthetics and recreation			X			X

Will the proposed action result in potential impacts to:	Unknown	Potentially Significant	Minor	None	Can Be Mitigated	Comments Provided
8. Cultural and historic resources				X		X
9. Evaluation of significance				X		
10. Generate public controversy				X		

V. Explanation of Impacts to the Physical Environment

1. Geology and soil quality, stability and moisture AND 3. Water quality, quantity and distribution (surface or groundwater)

If the proposed action is implemented, construction activities would result in some short term increases in sediment levels; the disturbed area would be confined to the construction area (approximately 100-125 feet of stream). The construction area is accessible by road and most construction activities will be completed within the existing road bed, which should minimize compaction and deposition. The project would be implemented based on conditions stipulated by permitting agencies as well as the use of construction Best Management Practices (BMPs) designed to reduce erosion and sedimentation and would include but may not be limited to the following measures:

- Work would occur during low flow conditions, which typically occurs late-summer or early-fall.
- Erosion control measures would be installed to control erosion and sediment release into the stream.
- Disturbed areas would be mulched and reseeded with a native plant mixture as soon as possible following construction.

The project will comply with all Montana DEQ short term water quality standards for turbidity related to construction activity.

2. Air quality or objectionable odors

Use of heavy equipment could impact air quality and create objectionable odors during construction in the immediate area. These impacts would be limited to period of construction (less than one week).

4. Existing water right or reservation

Even though the barrier will change the appearance of the stream, the proposed action will not affect the amount of surface stream flow runoff or water rights.

5. Vegetation cover, quantity and quality

During construction there will be localized impacts to vegetation during installation of the barrier. Impacts to vegetation would be limited to staging areas and ground immediately adjacent to the construction site, which is a road bed. Following construction, all disturbed areas will be mulched and reseeded with a native plant mix. Woody riparian species may also be planted to help stabilize banks.

7. Terrestrial or aquatic life and/or habitats

Installation of a fish barrier will divide the stream into a native fish reach and an area of mixed native/non-native assemblage. The barrier will contribute to much-needed quality habitat for WCT which is expected to have an overall positive impact on the conservation of native species.

8. Unique, endangered, or fragile wildlife or fisheries species

The long-term goal in this watershed is to retain a migration barrier that prevents the movement of non-native trout upstream to protect the genetically pure WCT population above the barrier. The action will have a positive impact on WCT conservation and reduces one potential extirpation risk to WCT in the Beaverhead watershed. WCT are federally Sensitive and are a Montana Species of Concern.

10. Changes to abundance or movement of species

Unobstructed movement of aquatic species is affected by the barrier. However, the long-term result of the segregation will be 5 miles of habitat protected for genetically pure WCT upstream of the barrier. The non-native/native fish assemblage would be retained downstream. The project should be a first step to increased abundance of genetically pure WCT.

VI. Explanation of Impacts to the Human Environment

1. Noise and/or electrical effects

Construction is expected to take one week or less. During construction, noise levels in the immediate area would be elevated, which could stress resident wildlife populations. Construction activities would occur during base flow conditions (late summer) after most breeding and nesting seasons and prior to hunting seasons.

6. Potential revenue and/or project maintenance costs

Barrier construction is expected to have a minor maintenance cost over time. The landowner will be responsible, with assistance from project partners.

7. Aesthetics and recreation

Disturbance of the ground and vegetation during and immediately following construction may be aesthetically displeasing. Any areas disturbed during construction activities will be recontoured and revegetated as soon as possible following construction. The barrier itself will be permanent but is located on private land and it is small and composed of wood, so it is expected to have minor aesthetic impact.

8. Cultural and historic resources

No impacts are expected, but the project will be reviewed by the State Historical Preservation Office and any concerns will be addressed.

VII. Narrative Evaluation and Comment.

There are no anticipated cumulative effects.

VIII. Discussion and Evaluation of Reasonable Alternatives.

1. No Action Alternative.

If no funding is provided through the FFIP, the applicant would have to seek additional sources of funding to complete the project, or the affected area of Cottonwood Creek would not have additional habitat for the long-term conservation of an important population of WCT.

The no action alternative would be to not install the barrier. The stream has a natural barrier that protects 0.6 miles of stream but does not provide enough stream length for functional and effective long-term protection of WCT. Eventually the few existing populations of WCT would be all that remain of WCT protection in the Beaverhead watershed.

2. The Proposed Alternative.

The proposed alternative intends to provide partial funding through the FFIP to install a fish barrier on Cottonwood Creek and establish 5.1 miles of habitat for WCT conservation. WCT currently inhabit 59% of their native range; in the Upper Missouri River Basin only 5% are genetically pure.

IX. Environmental Assessment Conclusion Section.

1. Other groups or agencies contacted, or which may have overlapping jurisdiction:

Army Corps of Engineers
Beaverhead Conservation District
Department of Environmental Quality

2. Evaluation and listing of mitigation, stipulation, or other control measures enforceable by the agency or another government agency:

None.

3. Is an EIS required?

No. We conclude, from this review, that the proposed activities will have an overall positive impact on the physical and human environment and will therefore not require the extensive analysis associated with an EIS.

4. Level of public involvement.

The project application to the FFIP has been posted on the FWP webpage for public comment. No comments have been received to date. The proposed project was reviewed and supported by the public review panel of the FFIP. The proposed project also will be reviewed by the Fish & Wildlife Commission, and funding will be contingent upon their approval. The EA will be distributed to all individuals and groups listed on the cover letter and the EA will be published on the FWP webpage: **www.fwp.mt.gov** under Public Notices.

5. Duration of comment period?

Public comment will begin on January 3, 2020 and conclude at 11:59 PM on February 2, 2020.

6. Person(s) responsible for preparing the EA.

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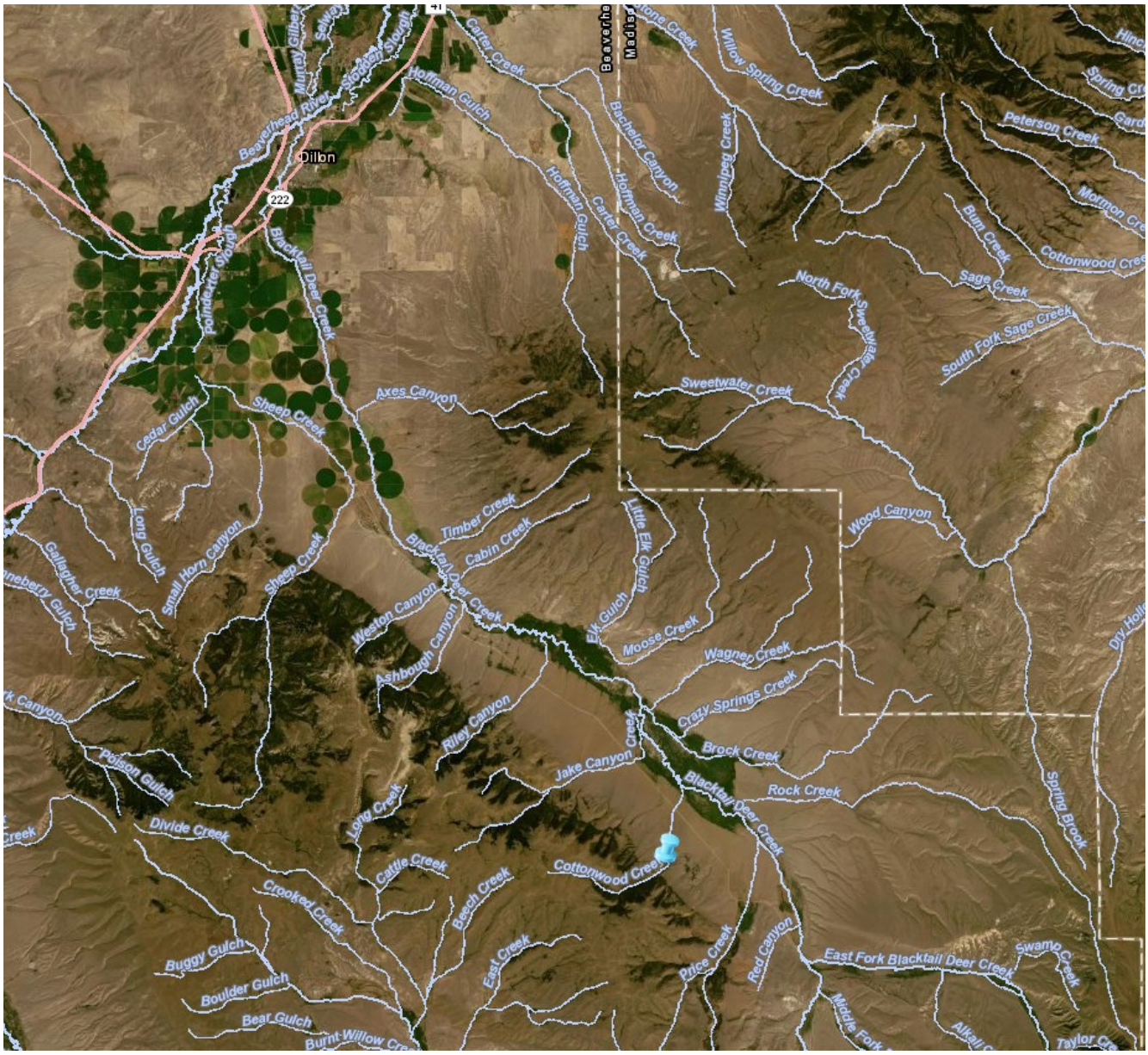

FIGURE 1: Project location (blue tack denotes project site)

FIGURE 2: Fish barrier design example

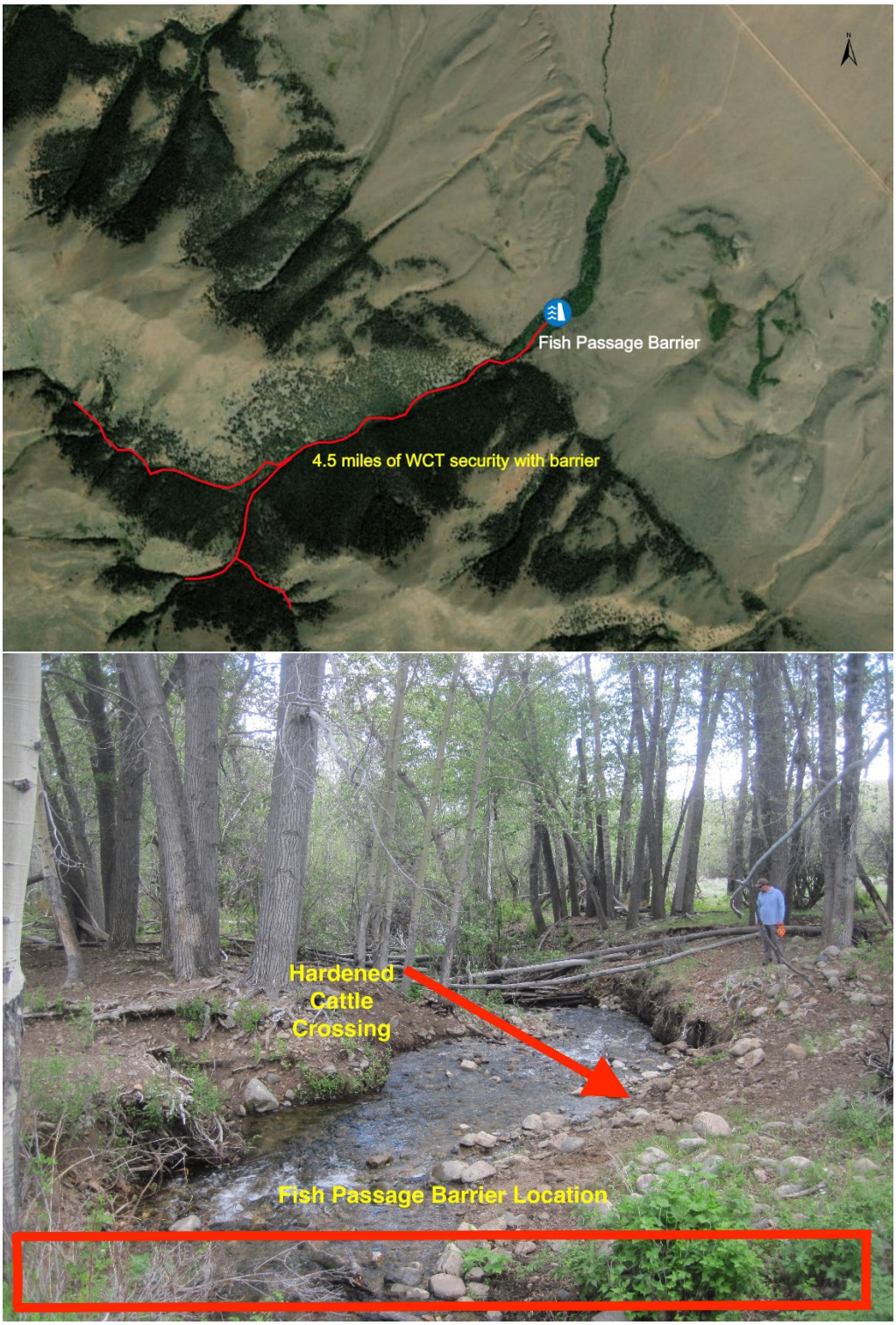

FIGURE 3: Barrier location detail